UNITED STATES PATENT AND TRADEMARK OFFICE

NOTICE OF ALLOWANCE AND FEE(S) DUE

23117	7590	08/25/2009

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER
ELPENORD, CANDAL

ART UNIT	PAPER NUMBER
2416	

DATE MAILED: 08/25/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,480	01/18/2005	Peterjan Van Nieuwenhuizen	36-1882	6986

TITLE OF INVENTION: DATA RATE CONTROL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	11/25/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u> Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

| 23117 | 7590 | 08/25/2009 |

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)

_____ (Signature)

_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,480	01/18/2005	Peterjan Van Nieuwenhuizen	36-1882	6986

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nonprovisional	NO	$1510	$300	$0	$1810	11/25/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
ELPENORD, CANDAL	2416	370-232000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❏ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❏ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❏ Individual ❏ Corporation or other private group entity ❏ Government

4a. The following fee(s) are submitted:

❏ Issue Fee

❏ Publication Fee (No small entity discount permitted)

❏ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

❏ A check is enclosed.

❏ Payment by credit card. Form PTO-2038 is attached.

❏ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❏ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❏ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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DATE MAILED: 08/25/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 427 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 427 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)
Notice of Allowability	10/521,480	VAN NIEUWENHUIZEN, PETERJAN
	Examiner	Art Unit	
	CANDAL ELPENORD	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *June 12, 2009*.

2. ☒ The allowed claim(s) is/are *1-3, 5-15, 20, renumbering as 1-15 respectively*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some* c) ☐ None of the:
        1. ☐ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the
            International Bureau (PCT Rule 17.2(a)).
    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF
    INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .
    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date _____ .
    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the
    attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)
1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____ .

Reasons For Allowance

1.   The following is an examiner's statement of reasons for allowance:

2.   Claims 1-3, 5-15, 20 are allowed (renumbering as 1-15 respectively).

The present invention is directed to a method for controlling the rate of transmission from a source of data to a user via a communications link, wherein processor is used to generate a signal representing a rate request which will be used in determining the rate at which data will be transmitted from the source to the user, said processor generating the signal by carrying out the steps of: obtaining an indication of the amount of congestion on said communications link, selecting a value indicative of the user's willingness to pay for a given transmission data rate, and determining the rate to be requested as a function of the indication of the amount of congestion and the user's willingness to pay weighted by a variable parameter. the processor thereafter communicating the signal to the source of data and the rate of the data transmission from the data source to the user then being controlled on the basis of the signal. Each independent claim uniquely identifies the distinct claimed features.

Regarding independent claim 1 (Currently Amended) a method of controlling the rate of data transmission from a source of data to a user via a communications link, wherein processing means are provided to generate a signal representing a rate request which will be used in determining the rate at which data will be transmitted from the source to the user, said processing means generating the signal by: obtaining a congestion charge on said communications link, selecting a value indicative of the user's willingness to pay for a given transmission data rate, determining the rate to be

requested where is t.h:~__d_~t;.4_tr'a~2sLY~i2s_s')~.!7~g.~_(J2~t~_~.~! second! as calculated at an nth iteration; and x~+__tj is the rate to be determined; x,*g is the charge to the user indicative of amount of congestion and is the product of x~, and congestion charge bt; w is the willingness to pay; delta is the time elapsed between two iterations: kappa is a constant control the speed with which said rate requests are adapted in response to changing congestion conditions as a function of the indication of a difference between the user's willingness to pay and a congestion cost which is the product of congestion charge and a previously determined data transmission rate, said difference being weighted by a variable parameter, the processing means thereafter communicating the signal to the source of data and the rate of the data transmission from the data source to the user then being controlled on the basis of the signal.

Regarding independent claim 10 (Currently Amended) a rate controller for controlling the rate of data transmission from a source to a user via a communications link, said rate controller including processing means for generating a signal representing a rate request which will be used in determining the rate at which data will be transmitted from the source to the user, said processing means including: means for obtaining a congestion charge for said communications link, selecting means for selecting a value indicative of the user's willingness to pay for a given transmission data rate, determining adapted to determine said rate to be requested using the following iterative equation: x~+~_Z_N_,+delta*kappa* x~~ (w - x~dg) where x,_ is the data transmission rate .(..b.~.t..&per second) as calculated at an nth iteration an ~ x.~_L ~_5

~t: 1: ~ ~t.rat: ~tt: q bed e t: ~ n i n e ~i ;.*.,;*. u,.~ ~.~h e c h ~ge t: o~ h ~ u s: e ~.jr ~ d

jc: a t: b'. e q f)~r hour ~to t" <u>congestion and is the product of x,; and congestion charge</u>

<u>~; w is the willingness to pay selected by selecting means in response to a determined</u>

<u>transmission rate; delta is the time elapsed between two</u>

<u>iterati~ns;....k~a.l2~..`.a..j:~..~.a....q~9.~.s..t..~.j`~.t..g#.i..r1.I?arameter~ and ~.[xj.) is a</u>

<u>reactivity parameter which varies during the data transmission to control the speed with</u>

<u>which said rate requests are adapted in response to changing</u> and means for

communicating the signal to the source, wherein the rate of the data

transmission from the source to the user is controlled on the basis of the signal.

The closest prior arts, Barham '047 discloses a method of controlling the rate of

data transmission (see, controlling the transmission data rate based on the user

willingness to pay and congestion pricing, col. 3, lines 60 to col. 4, lines 4, col. 14, lines

42-51) from a source of data (noted: data flow of a web connection, col. 8, lines 62-66)

to user (fig. 1 to fig. 3, User/Client) via a communications link (fig. 2, fig. 4, see the

transmission link between the source and the destination, col. 8, lines 28-37), wherein

processing means (fig. 2, fig. 4, see the token bucket shaper in combination with

packet rate controller, packet scheduler with means for setting up the price data signal

which then used to control the rate at which the application can transmit, col. 14, lines

42-51) are provided to generate a signal representing a rate request which will be used

in determining the rate at which data will be transmitted from the source (fig. 2, fig. 4,

see the token bucket shaper in combination with packet rate controller with means for

setting up the price data signal which then used to control the rate at which the

application can transmit, col. 14, lines 42-51) to the user (noted: determined price

based congestion signal by the which the computing device controls transmission is

communicated, col. 12, lines 9-21, noted: load notification message and flow weight

parameter in which the transmission is adjusted accordingly, col. 8, lines 48-51, lines

55-60), said processing means generating the signal by carrying out (fig. 2, fig. 4, see

the token bucket shaper in combination with packet rate controller with means for

setting up the price data signal which then used to control the rate at which the

application can transmit, col. 14, lines 42-51) the steps of: obtaining an indication of

the amount of congestion on said communications link (noted: determination of

congestion and pricing based on measured load, col. 12, lines 9-21, noted: using the

flow weight parameter and the network load to determine and introduce a bottleneck

flow, col. 9, lines 3-12), selecting a value indicative of the user's willingness to pay for a

given transmission data rate (noted: the application/user equipment transmitting

packets at transmission rate based on willingness value/ability to pay, col. 12, lines 9-

21), and determining the rate to be requested as a function of the indication of a

difference between the user's willingness to pay and a congestion cost which is the

product of congestion (noted: determining the rate for price congestion according to the

willingness to pay, col. 16, lines 16-58) and a previously determined data transmission

rate (noted: first determined transmission rate which is then adjusted based on the

willingness ability to pay, col. 16, lines 16-44), the difference being weighted by a

variable parameter (noted: fluctuating price in combination with the variable measured

load, pricing per unit of data packets(i.e. congestion indication, bottleneck scenario),

col. 13, lines 60 to col. 14, lines 17, col. 15, lines 29-63) the processing means

thereafter communicating the signal to the source of data (see, the load calculation

mechanism in combination with the price calculation mechanism compute the price

based on load information and broadcasts via message the price information to other

devices, col. 13, lines 60 to col. 14, lines 17) and the rate of the data transmission from

the data source to the user then being controlled on the basis of the signal (noted: the

packet rate controller and the packet scheduler using the pricing signal to determine

the transmission rate of packets, col. 14, lines 42-54).

Barham '047 further discloses updating of congestion pricing based on the

bandwidth of the packets, col. 13, lines 60 to col. 14, lines 15, col. 15, lines 65-67).

Litwin '098 from a similar field of endeavor disclose a conventional method for

charging per content based on the level of congestion on the communication link

(paragraph 0010, 0017-0018) where a network controller (fig. 2, element 220),

paragraph 0029, 0031.

The closest prior arts are silent with respect to the uniquely distinct claimed

features: "determining means adapted to <u>determine said rate to be requested using the</u>

<u>following iterative equation: x~+~_Z_N_,+delta*kappa* x~~ (w - x~dg) where x, is the</u>

<u>data transmission rate .(..b.~.t..&per second) as calculated at an nth iteration </u>an ~ x.~_L

~_5 ~t: 1: ~ ~t.rat: ~tt: q bed e t: ~ n i n e ~i ;.*.,;*. u,.~ ~.~h e c h ~ge t: o~ h ~ u s: e ~.jr

~ d jc: a t: b'. e q f)~r hour ~to t" <u>congestion and is the product of x,; and congestion</u>

<u>charge ~; w is the willingness to pay selected by selecting means in response to a</u>

<u>determined transmission rate; delta is the time elapsed between two</u>

iterati~ns;....k~a.l2~..`.a..j:~..~.a....q~9.~.s..t..~.j`~.t..g#.i..r1.I?arameter~ and ~.[xj.) is a reactivity parameter which varies during the data transmission to control the speed with which said rate requests are adapted in response to changing and means for communicating the signal to the source, wherein the rate of the data transmission from the source to the user is controlled on the basis of the signal".

The closest prior arts either singularly or in combination fail to anticipate or render the uniquely distinct claimed features obvious.

Dependent claims 2-3, 5-9, 11-15, 20 are allowed by virtue of their dependency on claim 1, 10 respectively.

3.   Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Arai et al (US 2002/0002470 A1), Phan et al (US 6,813,246 B1), McAuley et al (US 7,023,800 B1), Briscoe et al (US 7,426,471 B1), Kirby et al (US 6,671,285 B1), Loguinov et al (US 7,206,285 B2) and Sabry et al (US 6,728,266 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CANDAL ELPENORD whose telephone number is (571)

270-3123. The examiner can normally be reached on Monday through Friday 8:00AM

to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Candal Elpenord/
Examiner, Art Unit 2416

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2416